

-- This application claims the benefit of U.S. Provisional Application No. 60/098,760, filed September 1, 1998.--

Please make the following changes to the Specification:

On page 8, line 18 through page 8, line 25, please replace the paragraph with the following paragraph:

-- Figure 2 shows the T_H1/T_H2 responses following parenteral immunization with PTd-PLGA microparticles (batch PTd-1 of Example 2) prepared by solvent evaporation. Three groups of mice received a single dose of 5 μ g PTd-PLGA, PTd with alum or in solution in PBS. The levels of IFN- γ (see Fig. 2A) and IL-5 (see Fig. 2B) were determined by specific immunoassays in cultured spleen cells three days after stimulation with PT. Medium = negative control; iPT = inactivated PT; B pertussis = active pertussis bacteria and anti-CD/PMA = the positive control anti-CD3 antibody/phorbol 12-myristate-13 acetate;--

On page 9, line 4 through page 9, line 2, please replace the three paragraphs with the following three paragraphs:

-- Figure 4 shows the serum antibody titres to PTd following i.p. administration as described in Example 7 of PTd +FHA in PLGA (see Fig. 4A) (5 μ g each of PTd and FHA entrapped in PLGA microparticles according to Example 2 and 3); PTd + FHA + alum (see Fig. 4B) (5 μ g each of Ptd and FHA adsorbed onto alum; and PLGA (see Fig. 4C) (i.p.) (empty PLGA microparticles) to balb/c mice;

Figure 5 compares the T_H1/T_H2 responses following parenteral immunization of balb/c mice with PTd + FHA in PLGA (5 μ g each of PTd and FHA entrapped in

PLGA microparticles according to Example 2 and 3; 4 animals) and PTd + FHA + alum (5µg each of PTd and FHA adsorbed onto alum; 4 animals). The levels of IFN- γ (see Figs. 5A and 5B) and IL-5 (see Figs. 5C and 5D) were determined by specific immunoassays in cultured spleen cells three days after stimulation with PT. iPt = inactivated PT; FHA = filamentous haemagglutinin; B pertussis = active pertussis bacteria and anti-CD3/PMA = the positive control anti-CD3 antibody/phorbol 12-myristate-13 acetate;

Figure 6 shows the T_H1/T_H2 responses following i.p. administration of low dose (1 µg) FHA encapsulated in PLGA wherein Fig. 6A reflects the levels of γ -IFN, and Fig. 6B reflects the levels of IL-5. Spleen cells from individual mice were stimulated with medium alone (0), inactivated PT (PT), filamentous haemagglutinin (FHA), active pertussis bacteria (BP) and the positive control anti-CD3 antibody/phorbol 12-myristate-13 acetate (PMA/CD3); --

On page 10, line 8 through page 10, line 20, please, replace the two paragraphs with the following two paragraphs:

-- Figure 9 shows the T_H1 response (IFN- γ) and the T_H2 response (IL-5) following i.m. immunization with Treatment F of Example 10. The levels of IFN- γ (see Fig. 9B) and IL-5 (see Fig. 9A) were determined by specific immunoassays in cultured spleen cells from 5 animals (Mouse 1 through Mouse 5) three days after stimulation with PT. BG = negative control; PT-inactivated PT; B. pert = active pertussis bacteria and PMA/aCD3 = the positive control anti-CD3 antibody/phorbol 12-myristate-13 acetate; and

Figure 10 shows the T_H1/T_H2 responses following parenteral immunization with coacervated nanoparticulate Treatments A-F of Example 11. The levels of IFN- γ (see Fig. 10A) and IL-5 (see Fig. 10B) were determined by specific immunoassays in cultured spleen cells three days after stimulation with PT. IPT-1 = activated PT (1.0 μ g /ml); IPT-5 = inactivated PT (5.0 μ g /ml); FHA-1 = FHA (1.0 μ g /ml); FHA-5 = FHA (5.0 μ g /ml); BP = active pertussis bacteria and PMA/CD3 = the positive control anti-CD3 antibody/phorbol 12-myristate-13 acetate. --

On page 13, line 24 through page 14, line7, please replace the paragraph with the following paragraph:

-- The morphology and the particle size of the KLH-PLGA particles were examined by scanning electron microscopy (SEM) using a Leica Cambridge S360. Samples were mounted on stubs, gold coated and scanned at magnifications of x3,000 – 10,000. Particle size assessment by SEM was carried out by dividing the micrographs at the 5,000 or 10,000 magnification into different fields and counting the number of particles greater and less than 3 microns and 5 microns. Particle size determination was also carried out by laser diffractometry using a Malvern Mastersizer S Ver. 2.14. The microparticles were suspended in filtered 0.1% TWEEN 20, sonicated for 5 minutes and analyzed with continuous stirring. KLH-PLGA particles prepared as detailed above were found to have a smooth spherical appearance and a D50% of 2.5 μ m by laser light diffraction. By SEM, it could be seen that at least 50% of the particles had a diameter less than 5 microns.--